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Understanding the impetus for major systems change: A multiple case study of decisions and non-decisions to reconfigure emergency and urgent care services

Sheena McHugh[a,*], E. Droog[b], Conor Foley[a], M. Boyce[a], O. Healy[b], J.P. Browne[a]

[a] School of Public Health, University College Cork, Western Rd, Cork, Ireland
[b] South/South West Hospital Group, Erinville, Western Road, Cork, Ireland

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ABSTRACT

Objective: The optimal organisation of emergency and urgent care services (EUCS) is a perennial problem internationally. Similar to other countries, the Health Service Executive in Ireland pursued EUCS reconfiguration in response to quality and safety concerns, unsustainable costs and workforce issues. However, the implementation of reconfiguration has been inconsistent at a regional level. Our aim was to identify the factors that led to this inconsistency.

Methods: Using a multiple case study design, six case study regions represented full, partial and little/no reconfiguration at emergency departments (EDs). Data from documents and key stakeholder interviews were analysed using a framework approach with cross-case analysis.

Results: The impetus to reconfigure ED services was triggered by patient safety events, and to a lesser extent by having a region-specific plan and an obvious starting point for changes. However, the complexity of the next steps and political influence impeded reconfiguration in several regions. Implementation was more strategic in regions that reconfigured later, facilitated by clinical leadership and "lead-in time" to plan and sell changes.

Conclusion: While the global shift towards centralisation of EUCS is driven by universal challenges, decisions about when, where and how much to implement are influenced by local drivers including context, people and politics. This can contribute to a public perception of inequity and distrust in proposals for major systems change.

1. Introduction

The reconfiguration of hospital services is a global trend. It is defined as a "...deliberately induced change of some significance in the distribution of medical, surgical, diagnostic and ancillary specialties" available in each hospital or other acute care units in a locality, region or healthcare administrative area [1 p129]. It is characterised by the centralisation of specialist services at fewer hospitals, serving a higher volume of patients. Reconfiguration has been pursued in several countries including Canada [2], the United Kingdom [1,3,4], the Netherlands [5] and Scandinavian countries [6,7] across a range of clinical services. Emergency and urgent care services (EUCS) are among the most commonly reconfigured services [3].

In Ireland, EUCS reconfiguration was a pillar of a 2006 system-wide policy to reorganise healthcare delivery in the then newly established Health Service Executive (HSE) [8]. The HSE is responsible for the management and delivery of public health care in the Republic of Ireland, including the delivery of most urgent and emergency care through acute hospital emergency departments (EDs), acute assessment units and minor injury units across public and voluntary hospitals. The number of emergency admissions has increased by almost 1000 per annum in Ireland over the last ten years from 32,000 in 2005 to 41,500 in 2016, an increase of approximately 30% [9]. Prior to EUCS reconfiguration, 35 hospitals across Ireland operated full 24/7 emergency departments. Thus, part of the transformation programme involved consolidating 24/7 emergency departments (EDs) across regions, centralising complex care to larger tertiary hospitals and closing or "re-designating" the function of EDs at smaller hospitals from full 24/7 services to urgent care centres and local injury units. Centres of differing capacity and

* Corresponding author at: School of Public Health, University College Cork, Western Rd, Cork, Ireland.
E-mail address: s.mchugh@ucc.ie (S. McHugh).

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capabilities were intended to work together to create a hub and spoke network of emergency care across a geographical region.

The main drivers of reconfiguration are cost, workforce (especially the need to recruit and retain specialists), and concerns about the safety of low volume units [1,10,11]. Research on the effectiveness of reconfiguration in dealing with these challenges is mixed and contested [3,12]. A 2015 review of 123 proposed reconfiguration projects in the UK found no evidence of significant savings resulting from reconfiguration [10]. There is little evidence on the use of reconfiguration to reduce workforce difficulties. There is some evidence that high volume centres are associated with better outcomes for trauma [13], stroke care [14,15] and critical care for conditions including severe sepsis and respiratory diagnoses [16], as well as procedures including abdominal aortic aneurysm repair, colorectal cancer surgery and pancreatic surgery [17–19]. The magnitude of the association varies across conditions and the clinical and policy significance of the volume-outcome relationship is complicated by the methodological shortcomings of primary studies [12,20]. Access has been a notably absent as a driver in reconfiguration proposals [10]. Arguments against reconfiguration focus on the potential negative impact on access, health service utilisation and patient outcomes in certain circumstances [21–23].

As in other countries, the stated reasons for focusing on EUCS reconfiguration in Irish policy documents are cost, workforce, and safety, while access concerns are cited as a major barrier to reconfiguration [24]. Qualitative research with Irish stakeholders has found that different stakeholder groups use different lines of argument for and against EUCS reconfiguration. Clinicians and management largely propose arguments in favour based on patient safety, workforce; and efficiency claims in the wake of the economic recession. External stakeholders, including hospital campaigners and local political representatives, typically focus on access to care in arguments against reconfiguration [24]. Despite the high level of consensus among internal health service stakeholders in Ireland, to date, there has been inconsistent implementation of reconfiguration across regions.

Our aim was to examine the factors that have led to this variation, identifying the factors that influenced the initial decision to reconfigure services, and the factors that shaped the implementation approach and spread of reconfiguration. We used a conceptual framework outlining the key components of major systems change and how they interact to influence implementation [25]. This framework has been used to examine the centralisation of acute stroke services in the UK but to the best of our knowledge, it has not been applied to major systems changes in other jurisdictions.

2. Methods

2.1. Design

We used a multiple case study design analysing data from interviews and documents collected as part of a large qualitative study which was approved by two Research Ethics Committees in Ireland. All interview participants provided written consent.

Drawing on the aforementioned conceptual framework for major systems change [25], we focused on the initial decision to reconfigure EUCS in particular regions, and the subsequent spread of reconfiguration. While there is no universally accepted definition of 'spread' or 'scale-up' [26], the terms broadly refer to the deliberate expansion of a policy or programme to other health service delivery units (hospitals) in the same or very similar settings under which it was originally tested [26,27]. The impact of reconfiguration on patient experience and clinical outcomes was examined elsewhere [28–30].

2.2. Case selection

Case study regions (from eight administrative regions of the HSE) were selected by the research team based on the extent of ED reconfiguration in the region at the time of the study (2014–2015). Regions which introduced extensive changes, closing or reducing the function and hours of EDs at smaller hospitals were categorised as 'full reconfiguration'. Regions which introduced changes to the function of EDs at some smaller hospitals, but did not fully reconfigure services to achieve a complete hub and spoke model for the region were categorised as 'partial reconfiguration'. Regions where there was no change to the number or opening hours of EDs were categorised as 'little to no reconfiguration'. The lead researchers (SMH, ED, CF) categorised regions using descriptive data collected as part of the wider study, and discussed the categorisation with the study team (JB, OOR, MB) to reach consensus on case selection.

2.3. Interviews

In the original study, semi-structured interviews were conducted with a purposive sample of stakeholders who were centrally involved in the reconfiguration process in each region and at a national level. Participants were asked to suggest other individuals who could assist with the study. Participants were categorised according to their role in the health service. 'Internal stakeholders' referred to a heterogeneous group of non-clinical (management and patient advocates) and clinical (doctors and nurses) staff working in the public health service. 'External stakeholders' referred to those working outside the HSE and included public and private ambulance representatives, general practitioners (GPs), private hospital representatives, hospital campaigners, local media representatives, and local politicians. Potential participants were invited via e-mail or telephone. Interviews were carried out by two researchers previously unknown to participants (MB, ED), in either the participants' or researchers' place of work. Interviews were recorded and transcribed verbatim. The topic guide was informed by a framework of goals for healthcare system reconfiguration [31] and covered a range of topics from the initial decision to reconfigure, public consultation [32] and current challenges in the EUCS.

For the current study, an initial analysis sample of six stakeholders from each region was purposively selected from the study database (n = 36/173 interviews at regional level, 21%). Interviews were selected (by ED, CF and SMH) following the principles of critical case sampling to select internal and external stakeholders who would yield most information about the initial decision-making process in each region and initial implementation (where appropriate) [33]. The aim was to develop a thorough understanding of a given region rather than a particular stakeholder group perspective. Within the semi-structured topic guide, we focused on stakeholders' accounts of the drivers of reconfiguration, who was involved, the timeline, rationale, and contextual factors that influenced the initial decision, subsequent implementation and the outcomes of those processes.

2.4. Document analysis

Interview data were supplemented with the results of documentary analysis pertaining to proposals and recommendations for the model of EUCS in the six regions. Published regional planning documents were identified by a member of the study team working within the health service (OH). Official health policy documents and websites of the Irish Government or the HSE (2003–2015) and all documents and websites from official state agencies or interest groups that influenced health policy during that period were reviewed. Draft and unpublished versions were excluded.

2.5. Analysis

Framework analysis was used [34]. In the first phase, data for each region were analysed by one researcher (SMH) using NVivo software for data management. A coding framework was developed based on initial open coding and the conceptual framework for major system change [25]. A second researcher (CF) analysed data from three regions (South, Mid-West and Dublin South). Researchers compared and refined the coding framework based on their analysis and this was used to code the remaining interviews. Individual case summaries were developed for each region from the interview coding and document summary.

During the second phase, the researcher (SMH) developed thematic maps for each region synthesizing the main contextual factors and their relationship to key decision points. One researcher (SMH) grouped together codes relating to a given aspect of the conceptual framework (e.g. leadership) to develop a theme capturing how this factor related to the initial decision-making or implementation process. Each case was analysed separately, examining convergence and divergence toward themes in analyses of subsequent cases with similar outcomes (i.e. examining regions with 'full', 'partial' and 'little/no' reconfiguration as pairs). Cross-case analysis was conducted iteratively to identify patterns and differences across the regions. The final analysis was reviewed by all researchers involved in data collection and analysis (ED, CF, MB). Where inconsistencies occurred, researchers consulted with the project lead (JB) to reach consensus on the final themes.

As this analysis is based on interviews selected from an existing database, sampling, data collection and analysis were not iterative; we did not move between participants and data analysis to address 'holes' in the data [35]. However, additional interview transcripts and full documents were analysed to fully interrogate the conceptual categories from the pre-existing framework [25] and to refine our themes within those categories. Within the confines of the existing database of interviews, data saturation and additional analysis were judged on a number of inter-related factors [35,36]: the narrow focus of the study on the initial decision to reconfigure; the information power of purposively selected stakeholders; the

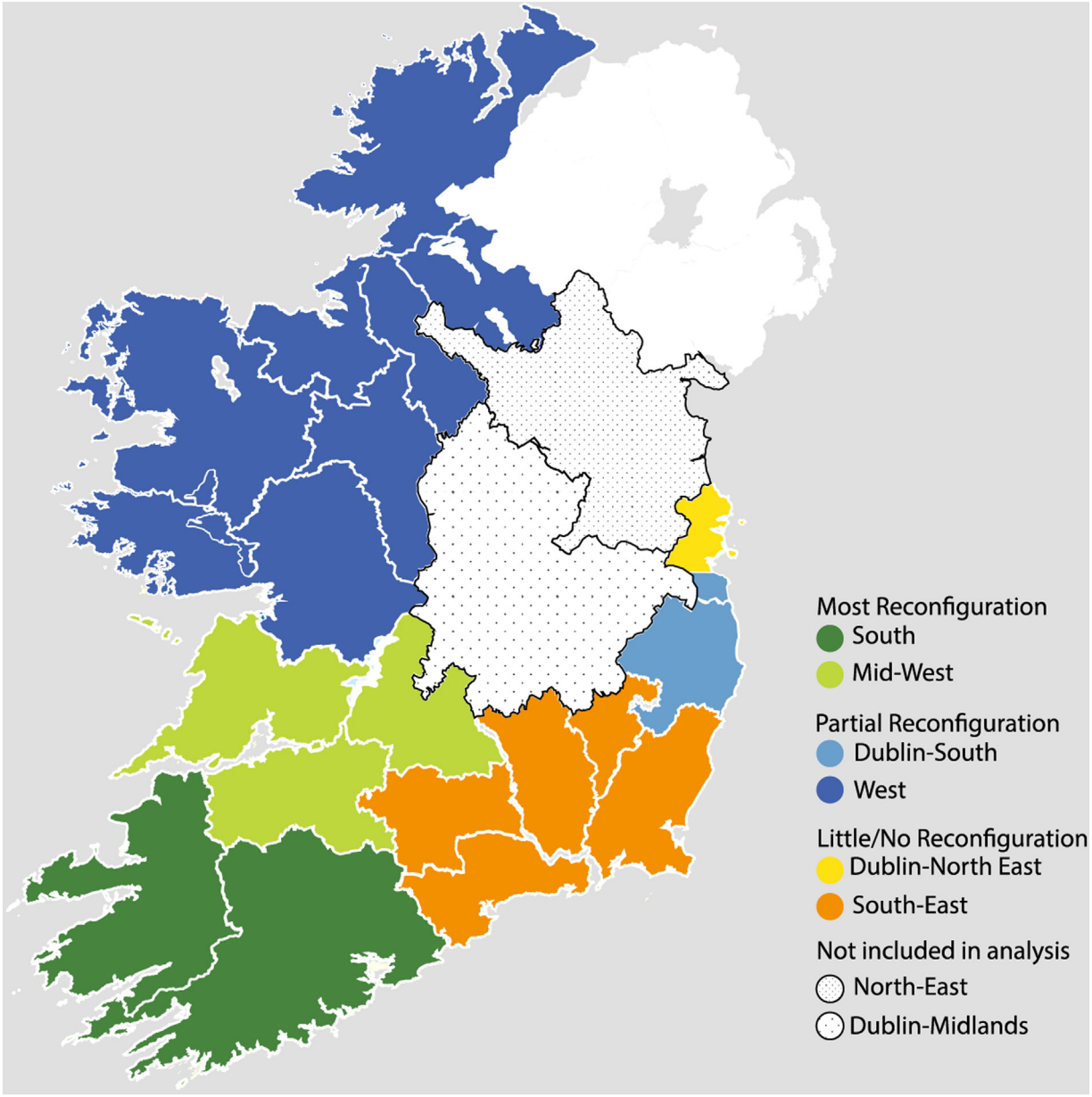

Fig. 1. Provides a map of the case study regions and their geographical boundaries selected based on the extent of ED reconfiguration in the region at the time of the study.

quality of their transcripts; and the application of a the pre-existing conceptual framework [37].

3. Results

Six regions were selected for analysis (Fig. 1). The South and Mid-West regions introduced extensive changes, closing or reducing the function and hours of EDs at smaller hospitals ('full reconfiguration'). The West and Dublin-South regions introduced changes to the function of EDs at some smaller hospitals, but did not fully reconfigure services to achieve a complete hub and spoke model for the region ('partial reconfiguration'). While two other regions (North-East, Dublin-Midlands) also represented 'partial reconfiguration', Dublin-South and the West regions were selected to allow comparison between predominantly urban and rural regions. In the South East and Dublin North-East regions by-pass protocols were introduced for some conditions, but there was no change to the number or opening hours of EDs in the region ('little to no reconfiguration'). Table 1 describes the EUCS profile of each region prior to reconfiguration and details on the changes introduced to the ED services.

In total, 42 interviews were analysed across six regions (initial sample of 36 with an additional 6 interviews analysed across regions) (supplementary file 1). Fig. 2 illustrates the main factors that influenced the initial decision, implementation approach and spread of reconfiguration, and the interaction between those factors (see supplementary file 2 and file 3 for more detail and supporting quotations).

3.1. Priming for change with region-specific plans

Region-specific plans were necessary to facilitate buy-in and the eventual implementation of reconfiguration but did not appear to be essential when deciding to initiate change. Partial reconfiguration occurred in the West in the absence of a regional plan which contributed to fraught implementation and uncertainty about the future role of other hospitals in the region. In the other regions where at least some reconfiguration took place (South, Mid-West, and Dublin South), regional plans facilitated a strategic approach to implementation. Plans primed stakeholders for change by providing a vision for local services that could be *'sold'* to healthcare professionals, the public, and politicians.

3.2. Having an obvious starting point

In regions where full reconfiguration occurred (South, Mid-West), there were obvious candidates for the hub hospitals: large regional hospitals with no geographically proximal equivalents. By comparison, in Dublin North-East where no reconfiguration was achieved, there were three large hospitals with mixed public and voluntary ownership, all of which were national hubs for different sub-specialty services. While one hospital was considered "vulnerable" to reconfiguration being the smallest of the three providing 24-h emergency care, there was no consensus on which of the remaining two hospitals should become the hub. Similarly, in the South East working relationships, typical patient flow and "layers" of earlier reform pulled the region's hospitals in different directions. Consequently, there were divergent opinions among clinicians in different hospitals about whether there was a sufficient hub in the region.

> "...the South East used to be an entity and *they* wanted to remain that way. I think a lot of *my* colleagues *here* didn't want that. They wanted to be linked to a bigger hospital in Dublin. The feeling here is that [if] we linked with [large hospital within the region]... [it] isn't big enough. It doesn't provide enough of what we can't do to make it worth it." (SE, internal medical)

Among regions that achieved partial reconfiguration, there were obvious targets for change among smaller hospitals. In Dublin South, one smaller hospital was described as a *"no-brainer"* for reconfiguration due to limited staffing and infrastructure, and proximity to the hub hospital.

3.3. Complexity of next steps stalling spread

The spread of reconfiguration stalled when the 'easiest' choices had been made and there were no obvious next steps. In the West, which only achieved partial reconfiguration by closing a small ED in one hospital, the future of other EDs remained uncertain at the time of interview and stakeholders from medium rural hospitals felt vulnerable. In Dublin North-East and Dublin South the initial decision and extent of reconfiguration respectively, appeared to be complicated by the mix of public and voluntary hospitals with different governance arrangements.

3.4. Political influence and cohesive opposition shaping when, where and how much change

Political *"influence"* was pervasive as it shaped the decision to change, what to change and the spread of change. According to some stakeholders, votes trumped international evidence and medical need: "...the one [politician] who is loudest and [says] 'I'm keeping this hospital open here' is the more likely one to get elected." (DS, internal management).

In regions where there was little or no reconfiguration (South East, Dublin North-East), failure to progress was attributed to reluctance among politicians and senior health service management "to make tough decisions". 'Playing politics' was a strategy of public opposition groups who lobbied and received support from senior politicians in cabinet. In Dublin North-East, stakeholders cited the presence of "very strong ministers" in the area who "were the ones that we mainly focused on to put the pressure on". In the South East, external stakeholders considered themselves "lucky... politically speaking" to have access to ministers and members of parliament.

> "If it really wasn't political, if it was really based on a medical need, someone would pick 2 or 3 hospitals in the greater Dublin area and have an A&E department but the medical politics of [listed the 5 large Dublin hospitals] would suddenly come to play and we're well aware of that so we play politics too." (SE, external politician)

Opposition was most effective where it was cohesive, uniting clinicians, politicians and the public. Partially reconfigured regions were characterised by a lack of cohesive opposition. In the West, where reconfiguration was "sprung" on stakeholders, opposition groups had little time to coalesce and local politicians were divided on the issue. In Dublin South, politicians at ministerial level were influential in reassuring the public about changes. In regions where most reconfiguration occurred, initial opposition was largely anticipated and managed as part of a strategic approach to implementation.

3.5. Triggering events providing impetus for change at smaller hospitals

Concerns about staff levels and patient safety at smaller hospitals received national attention because of the involvement of the national regulator. Investigations by Health Information and Quality Authority (HIQA) at smaller hospitals in the Mid-West and South were trigger events which drove decisions about the timing

Table 1
EUCS profile of each region and changes introduced to ED services.

	Full reconfiguration		Partial reconfiguration		Little/no reconfiguration	
	Mid-West	South	West	Dublin South	South East	Dublin North East
Geographic profile of region	Mixed urban/some rural areas Population: 378,210 Area (km^2): 8,252	Mixed urban/some rural areas Population: 663,176 Area (km^2): 12,161	Mixed urban/ mostly rural areas Population: 702,966 Area (km^2): 22,649	Urban Population: 563,560 Area (km^2): 2,168	Mixed urban/ mostly rural Population: 497,305 Area (km^2): 9,451	Urban Population: 578,317 Area (km^2): 532
Acute public hospitals providing adult[a] services at the time of the study [b]	4 acute hospitals: • 1 model 4: large state-owned teaching hospital • 3 model 2 hospitals: small local hospitals, 1 is a voluntary hospital	6 acute hospitals: • 1 model 4: large state-owned teaching hospital • 3 model 3: medium general hospitals, 2 are voluntary hospitals • 2 model 2 hospitals: state-owned local hosp.	6 acute hospitals: • 1 model 4: large state-owned teaching hospital • 4 model 3: medium state-owned general hospitals, • 2 model 2 hospitals: state-owned local hospitals	4 acute hospitals: • 2 model 4: large voluntary teaching hospitals • 1 model 3: medium voluntary general hospital • 1 model 2: small state-owned local hospital.	4 acute hospitals: • 1 model 4: large state-owned teaching hospital • 3 model 3: medium state-owned general hospitals	3 acute hospitals: • 2 model 4: large voluntary teaching hospitals • 1 model 3: medium state-owned general hospital
EUCS prior to reconfiguration	• 3 hospitals providing 24/7 EUCS: model 4 and 2 model 2 hospitals	• All providing 24/7 EUCS	All providing 24/7 EUCS	All hospitals delivering 24/7 EUCS except one model 2 hospital with 12 h service since 2002	All providing 24/7 EUCS	All providing 24/7 EUCS
'Special' considerations used as arguments against reconfiguration by external stakeholders		Dispersed population due to geographic spread of region. Distance to/between some hospitals	Dispersed population due to geographic spread of region. Distance to/between some hospitals		Dispersed population due to geographic spread of region. Distance to/between some hospitals	Serving a growing ageing population *'with significant social, physical and community'* challenges
Time period of changes	2009–2013	2011–2013	2011	2002–2013	NA • Initial discussions 2009–2010 with appointment of Project Clinical Leader for the review on reconfiguration. Resigned in 2010.	NA • Initial concerns and launch of campaign group opposing changes at one medium hospital in 2011
Changes to emergency department services in each region	• Model 2 hospital: ED reduced from 24 to 12 h (2009), then closed (2012), LIU remains • Model 2 hospital: ED reduced from 24 to 12 h (2009), then closed (2013), LIU remains.	• Model 2 hospital: ED closed, LIU remains (2013) • Model 2 hospital: ED closed, LIU remains (2013) • Model 3 (voluntary) hospital: ED reduced from 24 to 12 h (2011) and subsequently closed (2013) • Model 3 (voluntary) hospital: LIU transferred off-site (referred to locally as urgent care centre)	• Model 2 hospital: ED closed (2013), LIU remains (referred to locally as urgent care centre which operates LIU and MAU)	• Model 3 voluntary hospital: ED reduced from 24 to 12 h (2002). • Model 2 state-owned hospital: ED closed, LIU remains (2013)	• No consolidation of ED services in the region • Some trauma and stroke services reconfigured: • Model 4 hospital designated 'hub' for major trauma and acute coronary care [supported out-of-hours by model 4 in South] with ambulance bypass protocols.	• No consolidation of ED services had taken place in the region
Hub & spoke model achieved within region following EUCS reconfiguration	Yes	Yes	Yes for reconfigured services	Yes for reconfigured services	For trauma and acute coronary care	No

[*] Some regions (DS and DNE) have specific children's hospitals while hospitals in other regions provided both adult and children's EUCS.

[a] Some regions (DS and DNE) have specific children's hospitals while hospitals in other regions provided both adult and children's EUCS.

[b] In Ireland the models of hospitals involves 4 levels of acute hospitals in relation to acute medicine patients: model 4 - tertiary hospital with 24/7 ED and Acute Medical Unit (AMU); model 3 - general hospital with an ED and an Acute Medical Assessment Unit (AMAU) operating on a 12–24 hour basis; model 2 – local hospital with daytime Medical Assessment Unit (MAU) for selected low-risk (GP-referred) medical patients/ no ICU/ and with a Local Injury Unit (LIU); and model 1 - community/district hospital.

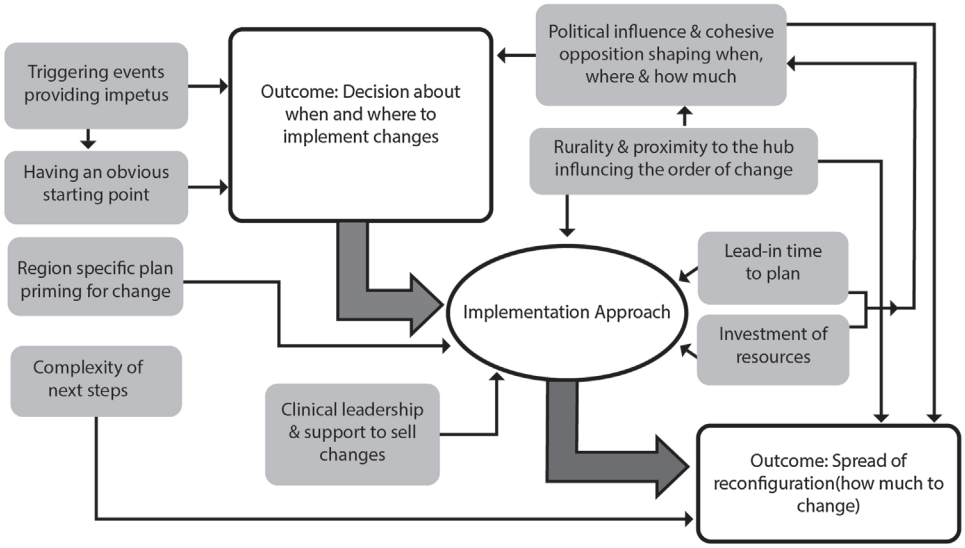

Fig. 2. Illustrates the main factors that influenced the initial decision to reconfigure ED services, the implementation approach and the spread of change which contributed to variation across regions.

and nature of changes to ED services. These investigations were also considered triggering events in *other* regions as they were used to justify later changes in the West and Dublin South where partial reconfiguration occurred.

> "Any evidence we'd have gathered was a national view, I suppose they looked at Ennis (small hospital in Mid-West) and they looked at Mallow (small hospital in South) and said 'right these are not safe'. . . and they applied that equally to St Columcille's (small hospital in Dublin-South)" (DS, internal management)

Stakeholders in regions where little or no reconfiguration took place (South East and Dublin North East) referred to general safety concerns relating to ED overcrowding and difficulties recruiting and retaining staff, however these issues alone did not garner sufficient national attention to trigger changes to ED services. Hospitals in the South East and Dublin North-East regions appeared immune to the rationale outlined in HIQA reports applied to other regions. Having observed changes in other regions, stakeholders considered a safety event or near miss to be essential to generate impetus for change.

3.6. Clinical leadership to sell changes and manage opposition during implementation

Planning and resources dedicated to the implementation of reconfiguration varied across regions (supplementary file 2). Among the necessary resources, clinicians who were "willing to do something publically for the HSE" by becoming leaders of reconfiguration facilitated a more strategic approach to implementation. They committed to "endlessly selling the view point" to stakeholders, particularly in the South and to a lesser extent in the Mid-West and Dublin-South regions. Reconfiguration leaders enlisted the help of other clinicians, particularly General Practitioners (GPs), to provide reassurance about changes: "the politicians were impressed that we also brought a GP representative to our meetings so we were getting a broad consensus across the medical field and that obviously provided significant reassurance for it" (DS, internal management). However, it should be noted that the extent and adequacy of public consultation was debated by internal and external stakeholders and varied across regions [32].

In contrast, the absence of clinical champions gave way to strong public and political opposition and local protest. In the West where public opposition was strongest "there needed to be a greater number of people extolling the virtues of the post [reconfiguration] scenario as opposed to the pre-scenario and it probably wasn't done as well as it might have been" (W, internal clinical). Similarly, in the South East where little or no reconfiguration took place, the initial clinically-led process to develop a regional plan was superseded by concerns about the availability of services at individual local hospitals.

3.7. Influence of rurality on order and extent of change but not decision to change

Rurality did not dominate the initial decisions about what services to reconfigure however the implementation of changes were considered less contentious in areas where there was access to alternative hospitals and "patients had options". Proximity to the hub "was a huge plus" for reconfiguration leaders as some smaller hospitals in the South, Mid-West and Dublin South were considered close to the hub thus minimising public opposition. Despite numerous alternative hub hospitals in Dublin South, there was only partial reconfiguration of smaller hospitals in the region reflecting the overriding influence political, medical and public opposition.

There was some evidence that rurality was being used as a reason to limit the spread of reconfiguration in some areas and to deviate from original plans during implementation which was ongoing at the time of the study (2014–2015).

3.8. "Lead-in time" and resources for planning and selling

Having "lead-in time" between the initial decision and implementation afforded some regions an opportunity to plan, negotiate, explain and sell changes to stakeholders to manage opposition. Regions that achieved most reconfiguration adopted this more strategic approach to implementation.

Sufficient "lead-in time" distinguished between contentious reconfiguration in the West and the relative ease of later reconfiguration in Dublin-South. Both regions achieved partial reconfiguration but differed in the timing of changes (2011 vs 2013) and the time taken to implement changes. As illustrated by Fig. 3, by 2013 when changes were implemented in Dublin South the policy context had shifted. A number of regions had already undergone reconfiguration and a national framework had been published out-

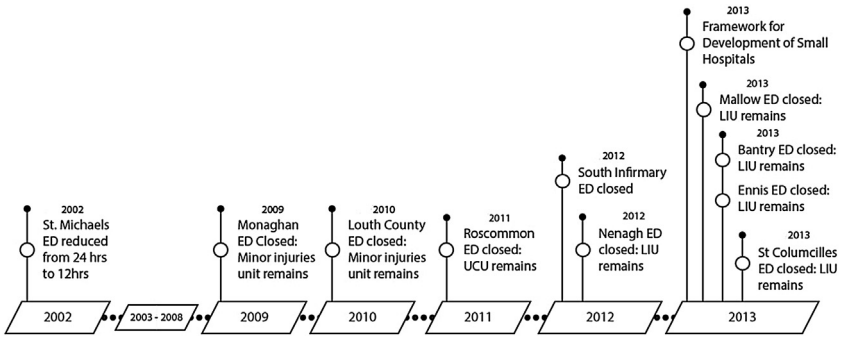

Fig. 3. Illustrates the timeline of changes to ED services in Ireland from 2002 to 2013.

lining the role of smaller hospitals which primed smaller hospitals for change [38]. As a result, the two partially-reconfigured regions differed in the extent of forewarning, planning, and subsequent public acceptance:

> "Roscommon [ED closure in the West] was kind of sprung, it just came out of nowhere. . .although it probably had been a subject of discussion for many years. The decision to close was a very sudden one. We didn't suffer that level of political backlash in this area". (DS, external politician)

Phased implementation allowing more time to negotiate change and build acceptance. There was substantial early opposition to reconfiguration in the Mid-West, the first of the case study regions to implement changes but with phased implementation across individual hospitals, resistance dissipated and resignation increased over time. As one stakeholder summarised the public campaigns "held off the inevitable" (MW: external campaigner). By comparison, later reconfiguration in the South was more strategic and less contentious. Day-case procedures shifted from the hub to one of the smaller reconfigured hospitals and new building began at that hospital. The investment of resources at reconfigured sites was "good politics" as the perception of reconfiguration shifted from a loss to a change in function.

Later reconfiguration gave regions an opportunity to learn from other areas. Paradoxically, external stakeholders in regions with little or no reconfiguration distrusted reconfiguration proposals having witnessed the implementation of changes in other areas.

> "[Communities] are right [to oppose reconfiguration], because they can't trust the alternative. When reports are published and they're saying 'we're going to take away your A&E department, because it's not fit for purpose, we're going to replace it with a properly resourced primary care service, properly resourced ambulance service and a properly resourced air ambulance service', and then people sit back for 5 years and they see where A&E places have closed in Monaghan and let's see Monaghan has no ambulances, they've no primary care centres. . ." (SE, external medical)

4. Discussion

This study of emergency department reconfiguration identifies the contextual factors that influence the decision to change, the nature of that change and how and to what extent it is implemented across a health system. While cost, workforce, and safety are consistently cited as the drivers of reconfiguration across health systems, these factors do not explain why some regions are reconfigured successfully while others remain relatively undisturbed by the policy. Our study highlights the additional influence of triggering events, political influence and cohesive opposition on the decision to reconfigure ED services. Approaches to implementation varied across regions that achieved at least some reconfiguration. This was influenced by lead-in time to plan and sell changes, clinical leadership and leveraged clinical support and the sequence of reconfiguration across the country.

Similar to the experience of hospital reconfiguration in the UK [1], politics had a pervasive influence on reconfiguration in Ireland. Medical and government politics shaped the decision to reconfigure, the nature of changes, the implementation approach and the spread of changes. Importantly, the presence of *any* political opposition to change was not sufficient to protect regions from reconfiguration, rather it was the opposition from local politicians who were influential in the party of the national government that distinguished between regions. It is argued that the reconfiguration process should be de-politicised, with decisions based on quality, safety and efficiency while retaining strong public engagement in local decision-making [38]. The Kings Fund suggested two options to de-politicise the process: allowing an independent Reconfiguration Panel rather than the Minister for Health, to be the final arbiter on reconfiguration proposals and using an independent body, with a mandate for change, to tackle issues in particular areas [39].

Designated clinical leaders facilitated the implementation of reconfiguration by fostering buy-in among their clinical colleagues, who in turn were in a position to reassure the public. This finding echoes analysis of the reconfiguration of stroke services in which the interplay between bottom-up and top-down leadership contributed to change [11]. Few regions in Ireland had a designated clinical lead to drive reconfiguration. Engaging physicians and involving patients and families are among the 'five rules' for successful major system change [40]. In the case of EUCS reconfiguration in Ireland, approaches to public engagement were typically ad-hoc, inconsistent or non-existent with few exceptions [32].

Another of the rules for major system change, 'attending to history', emphasizes the learning opportunities afforded by past failures and previous experience [40]. In this study, the contentious reconfiguration process in the West was held up as a warning sign by stakeholders in all other regions. Regions that reconfigured later in the policy lifecycle tried to avoid similar pitfalls by adopting a more strategic approach to planning, selling change and managing opposition. However, learning opportunities were not routine or formalised and there was a lack of explicit guidance for regions, increasing their reliance on individual leaders and the varying support and resources available to them. Formal networks with regular meetings between representatives from relevant stakeholder groups have been identified as a facilitator of major systems change, providing a platform for shared learning [25].

We situated our findings within a broader conceptual framework of major system change [25]. Unlike the original UK study, we could not disentangle the decision to introduce reconfiguration from decisions about the nature of those changes. Fulop et al. acknowledge that the relationships between the components of major systems change are unlikely to be linear and some

may occur simultaneously [25]. Furthermore, decision-making and implementation were occasionally indistinguishable. Ideally, implementation presupposes prior activities such as agenda setting and policy formulation [41]. This was not always the case for ED reconfiguration in Ireland. Patent safety concerns at some smaller hospitals were subject to investigations by the national regulator, pushing the issue of ED reconfiguration at smaller units onto the decision-making agenda. This is in line with Kingdon's conceptualisation of a focusing event which calls attention to an existing problem [42]. Kingdon argues that such events are rarely sufficient to carry a subject onto the policy agenda by themselves but in a hospitable environment can act as a catalyst for change. In this study, regions that achieved most reconfiguration had pre-existing plans and an obvious candidate for the hub hospital. Triggering events provided a starting point and justification for reconfiguration at smaller hospitals. In other regions where specific plans were not in place, triggering events contributed to public shock and opposition and insufficient lead-in time for implementation. Patient safety investigations informed a national framework on the role of smaller hospitals in Ireland [38], a policy document which itself reinforced the rationale for ongoing reconfiguration. Stakeholders in this study used the national framework to explain changes that preceded its publication, thereby imposing a false sense of rationality and linearity to policy development and implementation.

4.1. Strengths & weaknesses

The stakeholder interviews analysed in this study were purposively selected from a large qualitative study conducted with a range of issues relating to EUCS reconfiguration. Thus, we were dependent upon the original research achieving an adequate sample for data saturation on certain topics of interest (e.g. drivers of reconfiguration). This may have limited the depth and richness of information pertaining specifically to the initial decision-making process (e.g. the influence of rurality on decision-making). Within the confines of the existing database of interviews, we tried to achieve data saturation through additional analysis of transcripts and full documents, through the selection of information-rich transcripts that focused specifically on the initial stages of reconfiguration in each region and the use of an existing conceptual framework. While we analysed a number of interviews in addition to our initial analysis sample, we did not set a prior stopping criteria for judging data saturation as suggested for interview studies using established conceptual frameworks [37]. This would have provided greater transparency when establishing saturation.

In this study there are a different number of health professionals, managers, politicians, media representatives and campaigners represented in the sample for each region. This is due critical case sampling of stakeholders who would yield the most information about initial decision making and implementation at a regional level. While this limited our ability to understand the perspectives of a particular stakeholder group, the aim of the analysis was to develop an in-depth understanding of each region. A previous publication from the study explored the perspectives of different stakeholder groups and their views on the rationale for EUCS reconfiguration [24].

Our analysis goes beyond simply listing influential factors to explain how and when they shape policy decision-making and implementation. The results also tease out the relative importance of various factors, for example distinguishing between the pervasive influence of politics in decision-making and the lesser role played by region-specific plans and rurality. We have identified a number of factors which appear to be necessary to generate impetus for change, however none are sufficient on their own to drive policy implementation.

Scaling up any intervention is often based on an assumption that evidence supports change and health outcomes will be improved as long as the intervention is implemented well. This 'minimalist' perspective relies heavily on previous tests of effectiveness [27], which in the case of reconfiguration have been inconclusive. Our study does not examine fidelity to specific proposals regarding how reconfigured services should operate and integrate however we believe this warrants evaluation.

5. Conclusion

Reconfiguration proposals are typically driven by concerns about cost, workforce, and patient safety. However, these drivers do not exert equal influence in all areas and the initial "superficial resemblance" between regions can distract from underlying differences which explain variation in the process and outcomes of major systems change [1]. This study highlights how local context, people and politics influence decisions about when, where and how much to reconfigure. The failure to follow-through on implementation across all regions undermines the aforementioned rationale for pursuing reconfiguration at a national level.

Conflict of interest

The authors of this study declare that they have no competing interests.

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